The Water Cycle Hexaflexagon

Rapid evaporation takes place when you boil water on a stove, while slower evaporation takes place when you perspire or leave a glass of water in the open air. The rate of evaporation depends on temperature and something called humidity which is the amount of water vapor (gas) that is found in the air. Condensation is what takes place when water vapor changes from a gas back to a liquid. Water can condense at any temperature below boiling. The lower the temperature the faster the rate of condensation that can take place. Precipitation is when water falls from the air in the form of rain, sleet, snow, hail, or drizzle. Melting is when water changes from the solid phase to the liquid phase.

Sometimes water is stored or locked up for thousands of years. Water that has evaporated, condensed, and fallen as solid snow or ice in cold climates may remain that way for a very long time before it either melts or evaporates and rejoins the cycle. Water that percolates into the ground may also remain in the liquid phase if it is stored in an underground reservoir or held up within mineral or rock cracks. In other circumstances water may go through the cycle over and over again very quickly. In the tropics for example, water evaporates from the ocean, condenses, and falls back to the ocean as rain on a daily basis. The water cycle can be very interesting to think about if you consider the possible journeys and history of the water we all use every day. The next time you take a drink of anything, think about the places the water it may have been.

The Bonneville Power Administration (BPA) depends on the water cycle to provide enough water for generating the region's electricity. The future of fish and other wildlife habitat in the Columbia River's watershed also depends on the water cycle to provide a suitable environment for all to enjoy and use. Ponds and lakes that are formed by the accumulation of water are a vital part of that environment. This hexaflexagon uses a special geometric form to show the phases of the water cycle and how they affect us.

For additional information, please call 503-230-3478 in Portland, or toll free 1-800-522-8319 outside Portland.

To Assemble the Water Cycle Hexaflexagon:

1. Place drawing with printed side up on a table. Place nite on paper to connect Point A to point A'. Using the long edge of one scissors blade, press the scissors on paper and move along the line from point to point to make an indentation. (This is known as scoring.) Be careful not to cut through paper. Accurate scoring and folding is essential for easy manipulation of the finished hexaflexagon.
2. Repeat Step #1 for point B and point B', C and point C', point C' through F on T. These lines are diagonally placed.
3. Cut out the hexaflexagon along the far OUTSIDE border.
4. With the pages side up, fold all vertically scored lines face-to-face. (A-A' through F-F') Then, straighten out each fold.
5. Fold all diagonally scored lines (G-G' through P-P') so they are back to back. Then straighten out each fold.
6. Hold the hexaflexagon with the printed side down and the hexagonal flaps painted towards you. Bring the "Accumulation" section to fit over triangle B. Align and tape open edge.
7. Bring the "storage" section over triangle IV. Align and tape upper half of section. Leave two hexagonal flaps free. Take the triangles and tape each together.
8. Take triangle VI and align over triangle I. Fold together. Place the uncut flap in front of the triangle showing "storage" Triangle IV. Place the other hexagon flaps showing "condensation" Triangle V. Align the folded edge of the hexagon and tape in place.
9. Take hexagon, checking for any open edges. Tape all open edges toallow for maximum use and durability.

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